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Identifier: Toshihiro KAWAGUCHI, et al.

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Currently Amended) An assembly for a ball bearing with double raceway comprising:

an inner ring member provided with a large-diameter raceway surface and a small-diameter raceway surface from one toward another in an axial direction on an outer peripheral surface;

double row cages arranged in outer diameter sides of the respective raceway surfaces in the inner ring member; and

each of said double row cages including:

a large ring portion;

a small ring portion disposed on an inner diameter side of said cage;

said small ring portion including a first bridge surface axially extending by a predetermined distance from a lower portion of said small ring portion towards said large ring portion and a second bridge surface angularly extending at an incline from said first bridge surface towards a lower portion of said large ring portion; and

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said large ring portion including a first bridge surface
axially extending by a predetermined distance from an upper
portion of said large ring portion towards said small ring portion
and a second bridge surface angularly extending at an incline
from said first bridge surface of the large ring portion towards an
upper portion of said small ring portion;

said bridge surfaces together forming a single bridge for
containing a single ball; and

double ball rows respectively held in the cages,

wherein the inner ring member, the respective cages and the respective
ball rows are assembled in a non-separable manner, and are assembled in an
outer ring member provided with a large-diameter raceway surface and a
small-diameter raceway surface from one toward another in an axial direction
on an inner peripheral surface in correspondence to both the raceway surfaces
from one side in the axial direction.

2. (Original) An assembly for a ball bearing with double raceway as
claimed in claim 1, wherein the respective ball rows include a large-diameter
side ball row interposed between the large-diameter raceway surface of the
outer ring member and the large-diameter raceway surface of the inner ring
member, and a small-diameter side ball row interposed between the

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small-diameter raceway surface of the outer ring member and the
small-diameter raceway surface of the inner ring member, and a small-end side
shoulder portion is formed in another side in the axial direction on the
small-diameter raceway surface of the inner ring member, the small-end side
5 shoulder portion having a larger diameter than a diameter of a bottom of the
small-diameter raceway surface in the inner ring member and providing an
obstruction for preventing the small-diameter side ball row from escaping to
another side in the axial direction.

3. (Original) An assembly for a ball bearing with double raceway as
10 claimed in claim 2, wherein an intermediate side shoulder portion is formed
between the large-diameter raceway surface of the inner ring member and a
small-diameter raceway surface of the inner ring member, the intermediate side
shoulder portion having a larger diameter than a diameter of a bottom of the
large-diameter raceways surface formed in the inner ring member and providing
15 an obstruction for preventing the ball row of the large-diameter side assembly
from escaping to another side in the axial direction.

4. (Currently Amended) An assembly for a ball bearing with double
raceway as claimed in claim 2, wherein said ~~an~~ inclined surface is formed
between the large-diameter raceway surface and the small-diameter raceway

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surface in the inner ring member for guiding the ball of the large-diameter side ball row at the time of assembling three elements comprising the inner ring member, the respective ball rows and the respective cages in the outer ring member.

5 5. (Original) An assembly for a ball bearing with double raceway as claimed in claim 2, wherein the cage includes a large-diameter cage for holding the large-diameter side ball row, and a small-diameter cage for holding the small-diameter side ball row, the large-diameter cage is assembled in the large-diameter side ball row so as to be formed as a large-diameter side
10 assembly, the small-diameter cage is assembled in the small-diameter side ball row so as to be formed as a small-diameter side assembly, and the large-diameter side assembly and the small-diameter side assembly are respectively assembled in the large-diameter raceway surface and the small-diameter raceway surface in the inner ring member in a non-separable
15 manner.

6. (Currently Amended) A manufacturing method of a ball bearing with double raceway comprising:

a first step of preparing an inner ring member provided with a large-diameter raceway surface and a small-diameter raceway surface from one

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toward another in an axial direction on an outer peripheral surface, double row cages arranged in outer diameter sides of the respective raceway surfaces in the inner ring member, and double ball rows respectively held in the double row cages,

5 each of said double row cages including:

a large ring portion;

a small ring portion disposed on an inner diameter side of
 said cage;

10 said small ring portion including a first bridge surface
 axially extending by a predetermined distance from a lower
 portion of said small ring portion towards said large ring portion
 and a second bridge surface angularly extending at an incline
 from said first bridge surface towards a lower portion of said
 large ring portion; and

15 said large ring portion including a first bridge surface
 axially extending by a predetermined distance from an upper
 portion of said large ring portion towards said small ring portion
 and a second bridge surface angularly extending at an incline
 from said first bridge surface of the large ring portion towards an
20 upper portion of said small ring portion;

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said bridge surfaces together forming a single bridge for
containing a single ball;

5 a second step of assembling the inner ring member, the respective cages
and the respective ball rows in a non-separable manner so as to obtain an
assembly; and

a third step of assembling the assembly in an outer ring member
provided with a large-diameter raceway surface and a small-diameter raceway
surface in correspondence to both the raceway surfaces from one side in the
axial direction.